



**TRANSPORT
SCOTLAND**
CÒMHDHAIL ALBA

Environmental Impact Assessment Record of Determination

A95 130 Bridge of Avon
(bridge deck refurbishment)

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Project Details

Description

BEAR Scotland (BEAR) has been commissioned by Transport Scotland to undertake bridge deck refurbishment works on the A95 130 Bridge of Avon. The expansion joints require replacement as there is evidence of leaking. Waterproofing on the bridge is the original, and has therefore exceeded its design life, and the staircase to the old bridge has areas of spalled concrete requiring attention.

Works include the following construction activities:

- Replacement of two elastomeric joints with ETAG 032 Part 5 Mat expansion joints (using hydro-demolition),
- Staircase concrete repairs,
- Renewal of the bridge deck waterproofing system, including any necessary concrete repairs to the bridge deck,
- Reinstatement of bridge deck and footpath surfacing,
- Full white lining and stud refresh across the bridge.

The site compound will be located on the grounds of the Lady Macpherson-Grant Hall, which lies approx. 150 m north of the bridge.

The works are programmed to begin in late May 2022 (date TBC) and will take 68-days to complete, with works taking place Monday to Friday (07:30 to 17:30). Weekend working may be programmed to optimise weather and operational activities. Traffic management (TM) will employ lane closure with temporary traffic lights.

Location

The A95 130 Bridge of Avon is located on the A95 and spans the River Avon (Figure 1). The bridge piers are located out with the waterbody, approx. 5 m from the river edge (Figure 2).

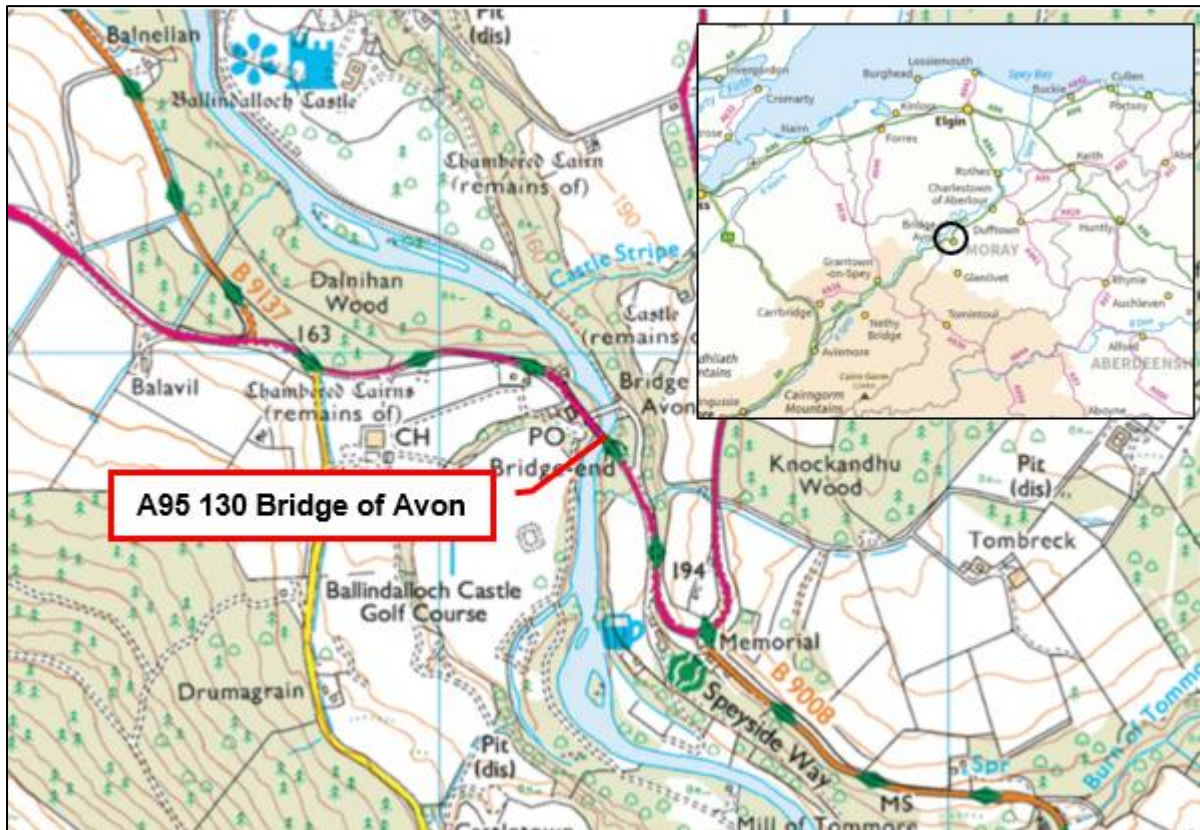


Figure 1. A95 130 Bridge of Avon (highlighting scheme extents). Source: Grid Reference Finder. Reproduced by permission of Ordnance Survey on behalf of HMSO. © Crown Copyright and database right 2022.



Figure 2. A95 130 Bridge of Avon. Source: BEAR Scotland

Description of local environment

Air quality

The scheme lies within the boundary of the Moray Council local authority, which has no [Air Quality Management Areas](#) (AQMAs) within its administrative boundary. The nearest AQMA, Inverness City Centre, lies approx. 52 km west of the scheme and has been declared for Nitrogen Dioxide (NO₂).

There are no sites registered on the Scottish Pollutant Release Inventory ([SPRI](#)) within 1 km of the scheme.

Baseline air quality is mainly influenced by vehicles travelling along the A95. Secondary sources are derived from day-to-day agricultural and forestry land management activities.

Cultural heritage

Four listed buildings lie within 300 m of the A95 130 Bridge of Avon.

- Ballindalloch Bridge of Avon over River Avon, Category A, 5m from trunk road
- Ballindalloch Castle, Gate Lodge and Entrance Arch, Category B, 60m from trunk road
- Ballindalloch Castle, Swiss Cottage, Category A, 85m from trunk road
- Lady MacPherson-Grant Hall, Category B, 150m from trunk road

The Category A listed '*Ballindalloch, Bridge of Avon Over River Avon*' (LB8462) lies perpendicular to the A95 130 Bridge of Avon at the northern extent of the bridge. Access from the A95 130 Bridge of Avon to the Category A listed structure is gained via a concrete staircase.

Works are not located within 0.3 km of a world heritage site, scheduled monument, inventory battlefield, conservation area, or garden and designed landscape.

Of lesser cultural heritage value, the A95 130 Bridge of Avon is recorded as an undesignated cultural heritage asset (UCHA) e.g., the bridge is recorded as a Canmore National Record and a Historic Environment Record (HER). Nine further UCHAs lie within 300 m of the A95 130 Bridge of Avon, but none share connectivity with the bridge.

Landscape and visual effects

The A95 130 Bridge of Avon is a 67 m long cantilever two-lane road bridge which is suspended approx. 13 m above the River Avon / River Livet, lower catchment (herein referred to as the River Avon). As such, the bridge forms a dominant linear landscape feature, which has a distinct character shaped by a large volume of fast-

flowing traffic, road infrastructure, parapets, barriers, etc. The bridge is situated on undulating ground that slopes, at both ends of the bridge, to the river and the bridge abutments are set-back from the river channel allowing for the continuation of the riparian corridor. The scale of the bridge creates a visual detraction in the context of the surrounding landscape, and as such contributes little to the quality and character of the area. Views north and south of the bridge include; the Old Bridge of Avon and gate lodge (Category A listed structure), the River Avon (including riparian habitat fringing the river) and Ballindalloch Castle golf course.

The scheme is not situated within a 'sensitive area' designated for landscape features e.g., National Park (NP), National Scenic Area (NSA). The scheme is also not situated within any areas designated for landscape quality or special characteristics e.g., regional parks, local nature reserves, etc.

Land use within 2 km of the A95 130 Bridge of Avon is categorised into the following: (i) managed woodland, (ii) designed landscape, (iii) freshwater area, (iv) plantation, (v) industrial or commercial area, (vi) railway features, and (vii) rectilinear fields and farms.

The [national scale land capability for agriculture](#) for land surrounding the A95 130 Bridge of Avon is 'Class 3.2' – land capable of average production though high yields of barley, oats and grass can be obtained (grass leys are common).

Biodiversity

The A95 130 Bridge of Avon spans the River Spey Special Area of Conservation (SAC) (EU Site Code: UK0019811).

A Habitats Regulations Appraisal (HRA) screening and consultation with NatureScot was undertaken to determine if the bridge refurbishment works could have connectivity with the River Spey SAC. NatureScot concluded that Likely Significant Effects (LSE) existed therefore an Appropriate Assessment (AA) was completed as part of the HRA process to assess potential risks to the qualifying features as a result of the works.

The [National Biodiversity Network](#) (NBN) online mapping tool records one mammal species (not of conservation importance) within 300 m of the A95 130 Bridge of Avon (in the last 10 years) within 10 km grid square NJ13. There are no records of otter, Atlantic salmon, freshwater pearl mussel or sea lamprey within 300 m of the A95 130 Bridge of Avon (in the last 10 years) within 10 km grid square NJ13.

A Preliminary Roost Assessment (PRA) and Preliminary Ecological Appraisal (PEA), undertaken during April 2021 noted that the bridge has moderate suitability to support roosting bats and is near riparian and woodland corridors which provide attractive foraging habitat for bats. Dawn and dusk bat activity surveys did not record any emergence/re-entry of any bats within the A95 130 Bridge of Avon. Due to the exposed nature of the abutments, and temperature fluctuations, the bridge also does not offer optimum roosting opportunities during the winter hibernacula period. Whilst

winter hibernation potential cannot be ruled out, the potential based on the evidence is considered negligible.

The Integrated Roads Information System (IRIS) records no invasive non-native species (INNS), as listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) (WCA), or injurious weeds, as listed under the Weeds Act 1959, on the A95 130 Bridge of Avon or surrounding area. There are also no records of invasive native perennials (including weeds), as listed in the Trunk Road Inventory Manual, on the A95 130 Bridge of Avon or surrounding area. A PEA, undertaken during April 2021, did not note any INNS, injurious weeds, or invasive native perennials on the A95 130 Bridge of Avon or surrounding area.

Geology and soils

Scoped out. As the works will take place entirely on the A95 130 Bridge of Avon, and due to the structure's height above the River Avon, there will be no impact on geology and soils.

Material assets and waste

The scheme is executed by the operating company as site operations e.g. 'As-of-Right' scheme of value less than £350,000. As a result, a Site Waste Management Plan (SWMP) is not required.

The main waste produced during the construction phase will be 428 tonnes of bituminous material, European Waste Catalogue Code: 17 03 02. 23 tonnes of concrete, European Waste Catalogue Code: 17 01 01 and 3 tonnes of steel, European Waste Catalogue Code: 17 04 05 will also be produced.

The following materials are required for the project:

- Sacrificial anodes
- Footway surfacing
- Spray applied bridge deck waterproofing
- Road surfacing
- Concrete kerbs
- UPVC service pipes
- Road studs

The equipment required for the project include:

- Handheld breakers
- Road paver
- Stihl saw

- Excavator
- Ride on roller
- Water bowser
- Road planer
- Generators
- Cat scan and genny

The following fuel and/or chemicals will be stored on site for the duration of the scheme:

- Diesel
- Oil
- Petrol
- Gas

Noise and vibration

Works are not located within a [Candidate Noise Management Area](#) (CNMA) or [Candidate Quiet Area](#) (CQA).

There is no noise modelled data available for the study area. However, given the rural nature of the area, and the low AADT flow, it is considered likely that noise levels will be low, with baseline noise levels mainly influenced by vehicles travelling along the trunk road. Secondary sources are likely derived from day-to-day agricultural and land management activities. That said, areas beneath and directly adjacent to the bridge abutments are subject to rhythmic low frequency noise caused by vehicles passing over bridge expansion joints.

Population and human health

The scheme is located on the A95 130 Bridge of Avon, approx. 0.5 km south of Ballindalloch. As such, only two residential properties, three community facilities (two village halls and a post office), one recreational greenspace (golf course) and one commercial premise (petrol station) lie within 300 m of the bridge. The residential properties lie between 50 m and 100 m of the bridge, with one property having no screening from the bridge and the other being partially screened by a riparian river embankment. The post office and petrol station lie 10 m west of the bridge and have no screening, and the village halls lie between 130 m and 150 m of the bridge and are screened by an intervening property. There are no sensitive receptors/land uses within 300 m of the bridge.

There are no [National Cycle Network](#) Routes within 0.3 km of the A95 130 Bridge of Avon. Pedestrian footpaths (one being a [Core Path](#) ID: SW05) run along both sides

of the bridge. There are no [Public Rights of Way](#), bus stops, bridle paths or other community assets with connectivity to the scheme extents.

The A95 130 Bridge of Avon is a single carriageway with the national speed limit applying throughout. The Annual Average Daily Traffic (AADT) flow (2020 data) is 3,621 (ID: 30867) and is comprised of:

- 25 two wheeled motor vehicles,
- 1,902 cars and taxis,
- 0 pedal cycles,
- 37 bus and coaches,
- 1,027 Light Goods Vehicles (LGVs), and
- 630 Heavy Goods Vehicles (HGVs).

There are no congestion issues noted on the A95 130 Bridge of Avon during the proposed working hours.

Road drainage and the water environment

The A95 130 Bridge of Avon spans the River Avon, which is a classified surface waterbody (ID: 23084) in the River Spey catchment of the Scotland river basin district. The main stem of the river is approx. 34.7 km in length and the river has been assigned a Water Framework Directive 2000/60/EC (WFD) overall classification of 'Good' and possesses an ecological classification of 'Good'. The river has also been assigned a classification of 'Good' for fish migration. The River Avon flows for approx. 1.8 km, where it then merges with the River Spey (R. Nethy to R. Avon) (ID: 23066).

The A95 130 Bridge of Avon lies on the ['Aberlour' and 'Middle Spey Sand and Gravel'](#) groundwaters, which have been classified as 'Good' and 'Poor' respectively.

The A95 130 Bridge of Avon is not located within a [Nitrate Vulnerable Zone](#).

The [Scottish Environment Protection Agency](#) (SEPA) flood map records that there is no likelihood of surface water flooding on the A95 130 Bridge of Avon due to its height above the River Avon. The river, and the riparian habitat surrounding the A95 130 Bridge of Avon are at a 'High' risk of flooding (10% Annual Exceedance Probability (AEP), 1-in-10-year flood event)

Road drainage on the bridge deck is provided by gullies which discharge, via a road drainage pipe, to a 10 m wide grassed embankment.

Climate

The Climate Change (Scotland) Act 2009 creates mandatory climate change targets to reduce Scotland's greenhouse gas emissions. The Scottish Government has

since published its indicative Nationally Determined Contributions (NDCs) to set out how it will reach Net Zero by 2045. A 2030 target, for example, has been set to reduce emissions of all major greenhouse gases by at least 75%, compared to a 1990/1995 baseline. Scotland's statutory framework also includes a net-zero emissions target date of 2045 and a further interim target for reduction of at least 90% by 2040, relative to the 1990/95 baseline.

BEAR Scotland, working on behalf of Transport Scotland, have a Carbon Management Policy in place with the core aim of reducing the carbon footprint that the company measures and reports annually.

Fuel will be required for transport to and from the scheme, which will lead to greenhouse gas emissions. Any release of greenhouse gas emissions can contribute to climate change.

Description of main environmental impacts and proposed mitigation

Air quality

During the construction phase, activities undertaken on site could potentially have some minor localised and short-term air quality impacts in proximity to the works. The construction phase will, for example, require a range of ancillary plant, vehicles and non-road mobile machinery (NRMM) which will contribute to local dust and air pollutants. The main sources are likely to be dust generated by breaking-out expansion joints (hydro-demolition) and cold milling the bridge deck.

Given the proximity to sensitive receptors, nature of the works, and consideration of mitigation detailed below, the proposed works impacts on local air quality levels during the construction period are assessed to be negligible adverse in magnitude.

Upon completion of the works, no residual air quality impacts are anticipated.

Proposed air quality mitigation measures:

- Vehicle equipment and NRMM will be switched off when stationary to prevent exhaust emissions. If any emissions of dark smoke should occur (except at start up), the vehicle equipment or NRMM involved will be taken out of service immediately and any defect rectified before use.
- All ancillary plant, vehicles and NRMM will comply with relevant EU standards e.g. (i) vehicles will be maintained, ensuring engines and catalysts work efficiently, and (ii) all vehicles will comply with MOT emission standards.
- If powered generators are required, the use of diesel or petrol will be avoided and mains electricity or battery powered ancillary plant used, where practicable.
- Cutting, grinding and sawing equipment will be fitted or used in conjunction with suitable dust suppression techniques e.g., water spray or local exhaust ventilation system that fits directly onto tools.
- Materials that have a potential to produce dust will be removed from site as soon as possible.
- Regular monitoring (e.g., by engineer or Clerk of Works) will take place when dust, particulate matter and exhaust emissions (DPMEE) generating activities are occurring. In the unlikely event that unacceptable DPMEE are emanating from the site, the operation will, where practicable, be modified and re-checked to verify that the corrective action has been effective. Actions to be considered include: (a) minimizing cutting and grinding on-site, (b) reducing the operating hours, (c) changing the method of working, etc.

Cultural heritage

Construction of the A95 road corridor (including the A95 130 Bridge of Avon) is likely to have removed any archaeological remains that may have been present. The potential for the presence of unknown archaeological remains in the study area has therefore been assessed to be low. Moreover, the works do not entail any earthworks or vegetation clearance, and works are restricted to made-ground on the A95 130 Bridge of Avon. As such, there is negligible risk of disturbing or damaging previously undiscovered or unrecorded items of cultural interest. Moreover, construction works are purely maintenance and are restricted to upgrading and strengthening, on a like-for-like basis, essential bridge components. As such, no significant adverse impacts on the cultural heritage or material assets of the A95 130 Bridge of Avon, which is recorded as an undesignated cultural heritage asset.

Site personnel will also be made aware of the proximity of Category A listed '*Ballindalloch, Bridge of Avon Over River Avon*' (LB8462). As construction works are restricted to made-ground on the A95 130 Bridge of Avon, there will be no impact upon the Category A listed structure.

The site compound will be located on the grounds of the Lady Macpherson-Grant Hall (a Category B listed building), approx. 150 m north of the bridge. Site personnel will therefore be made aware of the Category B listed status of this building.

The remaining listed buildings lie > 60 m from the scheme, and there is no direct connectivity between the scheme and these listed buildings. Moreover, the works do not include any alterations that would affect the historical and architectural character of these features. As such, application for listed building consent is not required.

Given the nature of the works, and consideration of mitigation detailed below, the proposed works impacts on cultural heritage during the construction period are assessed to be negligible in magnitude.

Upon completion of the works, no residual air quality impacts are anticipated.

Proposed mitigation:

- People, materials, ancillary plant, vehicles and NRMM will, as much as is reasonably practicable, only be present on areas of made/engineered ground, i.e. A95 130 Bridge of Avon and site compound. Where access out with these areas are required for the safe and effective completion of the scheme, it will be reduced as much as possible and ideally will be limited to access by foot.
- There shall be no placement of ancillary plant, vehicles and NRMM, or storage of materials adjacent to walls or the bridge deck of the Category A listed '*Ballindalloch, Bridge of Avon Over River Avon*' (LB8462).
- The site compound will have designated access routes for vehicles and operatives on foot. Heras fencing will also be erected around the site compound and around the staircase of the A95 130 Bridge of Avon during the works.
- Should any unexpected archaeological evidence be discovered or revealed during construction works, construction activities in the immediate vicinity will be halted, the area of interest will be cordoned-off, and BEAR Scotland

Environmental Team will be contacted to arrange consultation with the relevant local authority (Moray Council) and/or Transport Scotland's Historic Environment Advisor (TSHEA) to enable appropriate measures to be implemented to mitigate potential impacts.

Landscape and visual effects

Construction activities associated with the works, including the use of work compounds, will result in a temporary localised visual impact along the A95 at the A95 130 Bridge of Avon. The site compound will also be located on the grounds of the Lady Macpherson-Grant Hall, which lies approx. 150 m north of the bridge. No vegetation will be removed as a result of the proposed works.

Considering the nature and duration of the works, and the mitigation detailed below, impacts on landscape are assessed as temporary negligible adverse in magnitude.

Upon completion of the works, no residual impacts are anticipated e.g., the works only involve like-for-like bridge deck refurbishment.

Proposed landscape and visual effects mitigation measures:

- Construction vehicles will not be left in places where soil or vegetation can be damaged. If damage to soil or vegetation occurs, this will be lightly cultivated or graded (upon completion of the works) to allow natural recolonization by local species and promote integration with existing landscape character.
- Upon completion of the works, the grounds of the Lady Macpherson-Grant Hall will be reinstated to pre-construction conditions.
- The site will be monitored regularly for signs of litter and other potential contaminants and litter will be removed before and after works take place. The site will also be left clean and tidy.

Biodiversity

Habitat north and south of the A95 130 Bridge of Avon is of low intrinsic value because the trunk road is subject to cyclic maintenance e.g., grass cutting, weed control, etc. Land surrounding the bridge therefore has extremely limited vegetation cover or shelter available for any mammal species of conservation importance and it is therefore considered unlikely that any mammal species of conservation importance are associated with permanent habitat or resting places within the area of likely construction disturbance. The PRA and PEA have also not identified the need for any species licensing requirements in order for works to commence on the A95 130 Bridge of Avon. The PEA also did not note any INNS, injurious weeds, or invasive native perennials on the A95 130 Bridge of Avon, or surrounding area.

All works are also restricted to made-ground on the A95 130 Bridge of Avon, with only upgrading and strengthening, on a like-for-like basis, essential bridge deck components being undertaken. As such, there is no direct hydrological connectivity between the scheme and the River Avon (and by association the River Spey SAC), therefore the river will retain its present flow characteristics and will continue to allow

fish passage. Restricting works to made-ground on the A95 130 Bridge of Avon also ensures that the works do not involve any physical altering or removal of habitat or result in any habitat fragmentation. Any species in the area are also likely to be accustomed to road noise on the A95 and the scheme is of short duration (68-days) utilising a daytime working pattern, negating the requirement for artificial lighting. Road space and proximity of agricultural land also limit the surrounding areas habitat potential.

While works will not result in a direct impact on the River Spey SAC, potential indirect risk exists. The proposed works, for example, will be carried out directly over the River Spey SAC. Any loss of containment e.g., concrete/cement wastewater from a breach of hydro-demolition bunding, or spill of fuel, oil, chemicals (i.e., hydraulic fluid), or concrete/cement wash water could therefore have an Adverse Effect on Site Integrity (AESI). The severity being contingent on the substance and quantity lost. That said, hydro-demolition bunding will follow industry best practice and materials will be stored in the compound. The accidental release of pollutants is also extremely unlikely. Pollution prevention measures, for example, will be strictly enforced onsite and Pollution Prevention Guidance (PPGs) and Guidance for Pollution Prevention (GPP) will be strictly adhered to, reducing the likelihood of a loss of containment occurring.

The proposed works also have the potential to cause noise and visual disturbance impacts to the qualifying interests of the River Spey SAC. The works will, for example, require a range of ancillary plant, vehicles and NRMM which will emit noise and create potential disturbance. The works will also require delivery of materials and the presence of personnel to facilitate hydro-demolition of the two elastomeric joints. However, disturbance will be localised to the bridge deck, the compound, and the immediate surrounding area.

A HRA screening and consultation with the NatureScot Area Officer for Moray (May 2021) also concluded that LSE existed therefore an AA was completed as part of the HRA process to assess potential risks to the qualifying features as a result of the works. The AA concluded that there is sufficient information and assessment evidence to conclude that with mitigation in place, the risk of LSE on the River Spey SAC and its qualifying species, can be excluded, on the basis of the objective evidence noted above. The Area Officer agreed *'that there is sufficient information to conclude that there will be no LSE on any of the qualifying interests of the River Spey SAC with the implementation of mitigation and control measures detailed in Section 4 of the HRA document'*.

Considering the nature, short-term duration, size and scale of the scheme, and the mitigation detailed below, the potential for significant species disturbance within the area of likely construction disturbance is somewhat diminished. The proposed works impacts on biodiversity throughout the construction period are therefore assessed to be temporary minor adverse in magnitude.

Upon completion of the works, no residual impacts are anticipated in relation to biodiversity.

Proposed biodiversity mitigation measures:

- All mitigation measures detailed within 'noise' and 'road drainage and water environment' will be adhered to.
- All site personnel will be made aware of the protected status of the River Spey SAC.
- There will be no materials, ancillary plant, vehicles or NRMM stored within 10 m of the River Avon.
- To reduce disturbance, standard construction hours will be 07:30 - 17:30 (Monday to Friday). If any works are required out with the agreed working hours, BEAR Scotland's Environmental Team will be contacted to discuss.
- BEAR Scotland will appoint an Environmental Clerk of Works (EnvCoW) to visit the site periodically to supervise operations onsite during critical work phases and to ensure appropriate environmental safeguards are being adhered to. The EnvCoW will undertake an initial day-one site visit to review site management practices. The EnvCoW will also brief all site personnel as part of the induction process with regard to the potential presence of protected species and sensitive habitats, the mitigation measures, their legal obligations and any licensing conditions imposed on them. Following the initial day-one site visit, site visits are anticipated to be arranged weekly. More frequent visits may be required during sensitive site activities (e.g., hydro-demolition works, removal of two elastomeric joints, etc.). The EnvCoW will undertake site audits and will also have the authority to stop works should any breach of the Site Environmental Management Plan (SEMP) be noted.
- The Contractor will utilise a SEMP, which will detail the mitigation to be implemented and how this will be monitored. The SEMP will include best practice construction methods and include the use of appropriate pollution controls (i.e., PPGs and GPPs).
- Toolbox Talks, as appended to the SEMP, will be delivered to all site personnel prior to works commencing. The Toolbox Talks will provide details of protected species that have the potential to be impacted by the works and any mitigation measures required to prevent disturbance.
- Site personnel will remain vigilant for protected species and will be instructed to not approach or touch any animals seen on site. Any sightings of protected species will also be reported to BEARs Environmental Team. Should a protected species be encountered or move within 50 m of the active works (including compounds), works will be temporarily halted until the animal(s) move at least 50 m away from the construction site, or until BEARs Environmental Team can provide advice.
- The Contractor will employ 'soft-start' techniques for all noisy activity to avoid sudden and unexpected disturbance during works. Each time the activity is started up after a period of inactivity, the noise levels will be gradually increased over a period of 30 minutes to permit animals (and birds) to move away from the disturbance.
- The works corridor will be minimised as far as possible and materials, ancillary plant, vehicles, NRMM and personnel will be constrained to this area through the use of temporary barriers to minimise damage to habitat adjacent to the works

corridor. The works corridor will comprise the A95 130 Bridge of Avon and the compound area.

- All equipment stored onsite will be checked at the start of each workday to ensure mammal species are not present. Any storage containers/shed within the compound will also be secured overnight to prevent exploration by mammal species. Any areas where an animal could become trapped (e.g., storage containers) will also be covered at the end of each working day, to avoid mammals falling in and becoming trapped.
- If fencing is utilised at the compound (or anywhere else), a gap of 200 mm from ground level will be provided, allowing free passage for mammals and preventing entrapment.

Geology and soils

Scoped out. As the works will take place entirely on the A95 130 Bridge of Avon, and due to the structure's height above the River Avon, there will be no impact on geology and soils.

Material assets and waste

There will be limited consumption of materials or natural resources e.g., mainly attributed to road material, concrete, and two elastomeric joints. The generation of waste will also be limited to low volumes of road planings and concrete and steel from the two elastomeric joints. Waste will be removed from site and fully recycled. Given the low volumes of material consumption and waste produced, the impacts are assessed to be negligible adverse in magnitude.

The Contractor will be responsible for the disposal of road planings (European Waste Catalogue Code: 17-03-02), and this will be undertaken in accordance with a Paragraph 13 exemption, as described in Schedule 3 of the Waste Management Licensing Regulations 2011 (exemption number: WMX/XS/2002298).

Works are restricted to areas of made-ground on the A95 130 Bridge of Avon therefore it is considered that there is a low risk of contamination / hazardous materials being present. However, if any contaminated land requiring remediation were encountered, it will be contained and/or removed in a safe and controlled manner to the standards required by SEPA. Any removal of potentially hazardous material is likely to constitute a net positive impact as this will remove the risk of any future contamination.

Upon completion of the works, no residual impacts are anticipated on materials or waste.

Proposed material and waste mitigation measures:

- Good materials management methods (e.g., 'just-in-time' delivery) will be implemented wherever possible.

- Care will be taken to order the correct quantity of materials to prevent the disposal of unused materials.
- Bulk material will be ordered/delivered to site, without packaging where possible.
- The Contractor will comply with all 'Duty of Care' requirements, ensuring that all surplus materials and waste are stored, transported, treated, used and disposed of safely without endangering human health or harming the environment. Material transfer notes and/or waste exemption certificates (if required) will also be completed and retained.
- All material removed from the A95 130 Bridge of Avon will be taken to a licensed recycling facility.
- Designated areas will be identified, within which all materials and personnel, including construction compounds, will be contained to limit environmental disturbance during construction works. This will include a designated area (if required) for segregation and reuse of waste materials.
- The selection of areas for materials stockpiling will avoid sensitive locations such as road drainage and surface waterbodies. Stockpiled materials with leachate potential, for example, will be stored away from road drainage to prevent cross-contamination with other materials, wastes or groundwater.
- Materials will be stored with the appropriate security to prevent loss, theft or vandalism.
- Wastewater from welfare facilities (if required) will be subject to effluent treatment followed by tanker removal.
- If hazardous substances are used onsite, each substance will be subject to assessment under the Control of Substances Hazardous to Health (COSHH) Regulations 2002. Hazardous substances will also be clearly labelled and disposed of, in line with COSHH safety data sheets. COSHH waste must also not be mixed with general waste and/or other recyclables.

Noise and vibration

Given the nature of the works, no ground-borne vibration impacts have been forecast.

During the construction phase, activities undertaken on site could potentially have some localised and short-term noise impacts in proximity to the works. The works will, for example, require a range of equipment, vehicles and NRMM for cold milling in preparation for carriageway resurfacing. Noise will also be generated by during hydro-demolition works. Any temporary short-term increase in noise levels could cause disturbance to local wildlife. However, the works are anticipated to only take 68-days to complete, with works programmed to take place between 07:30 and 17:30. Given the short-term duration and time of day, proximity to sensitive receptors, nature of the works, and in consideration of the mitigation below, the proposed scheme impacts on noise levels throughout the construction period are assessed to be temporary negligible adverse in magnitude.

Upon completion of the works, no residual impacts are anticipated in relation to noise.

Proposed noise mitigation measures:

- If unacceptable noise is emanating from the site the operation will, where possible, be modified and re-checked to verify that the corrective action has been effective. Actions to be considered include (a) minimizing cutting and grinding on-site, (b) reducing the operating hours, (c) repositioning equipment, (d) changing the method of working etc. Corrective actions will be actioned through the non-conformance reporting procedure, which ensures a root-cause analysis is carried out on each incident. The non-conformance procedure also ensures that appropriate corrective and preventative action measures are agreed and implemented in a timely fashion with all parties, and are recorded and actioned through to closeout, and fully auditable and traceable.
- If ancillary plant, vehicles or NRMM not assessed by this RoD are required to complete the works, then an immediate review will take place between the Clerk of Works, Senior Engineer and BEARs Environmental Team, as appropriate.
- Ancillary plant, vehicles and NRMM with directional noise characteristic will (where practical) be shut down in intervening periods between site operations.
- The use of percussive hand-tools, grinders, impact wrench's, chipping hammers, etc. will be avoided (except where there is an overriding justification), and if used will be fitted with mufflers or silencers of the type recommended by the manufacturer.
- Drop heights from vehicles and NRMM will be kept to a minimum to minimise noise when unloading.
- All ancillary plant, vehicles and NRMM used onsite will have been regularly maintained, paying attention to the integrity of silencers and acoustic enclosures.
- All compressors will be 'sound-reduced' models fitted with properly lined and sealed acoustic covers which will be kept closed when in use.
- HGV, site vehicles and NRMM will be switched to the minimum setting required by HSE and, where possible, will utilise 'broadband non-tonal' or 'directional sound reversing' alarms. Speed limits will also be reduced through the works.

Population and human health

Works are restricted to areas of made-ground on the A95 130 Bridge of Avon and works do not require any private land acquisition. The works will also not affect the integrity of the current or future land use within the local area. As such, the proposed scheme is assessed as having no impacts on residential, commercial, or community land.

Traffic management (TM) will employ lane closure with temporary traffic lights, with non-motorised users (NMUs) safely escorted through the site. Access to properties will also be maintained throughout the works.

Bridge deck refurbishment works may impact the local population through increased construction traffic utilising local roads to gain access to the A95 130 Bridge of Avon. However, the number of construction vehicles required onsite is low given the scale and scope of works. The number of construction operatives is also limited given the scope of works, and all work will be undertaken utilising a day-time working pattern. The presence of a small workforce, and limited construction traffic, is therefore unlikely to cause significant disturbance in vicinity of the works.

Due to the nature of the works, distance from receptors, and in consideration of the mitigation below, impacts on population and human health are assessed as temporary minor adverse in magnitude.

Upon completion of the works, no residual impacts are anticipated in relation to population and human health:

Proposed population and human health mitigation measures:

- All mitigation measures detailed within 'Air quality' and 'Noise and vibration' will be adhered to.
- Any changes of schedule (e.g., change to night-time works programme) must be communicated to local residents throughout the programme.
- Appropriate measures will be implemented to permit the safe passage of NMUs of all abilities utilising the footpaths, which also accommodate Core Path SW05.
- Journey planning information will be available for drivers online at the trafficscotland.org website. Journey planning information will also be available for drivers online through BEARs social media platforms.
- A Traffic Management Plan (TMP), which includes measures to avoid or reduce disruption to road traffic, will be produced in accordance with the Traffic Signs Manual (Department of Transport 2009). The TMP will ensure that there is no severance of community assets, access routes or residential development.

Road drainage and the water environment

While works at the A95 130 Bridge of Avon will not result in a direct impact on the River Avon, potential indirect risk exists. A loss of containment e.g., fuel, oil, chemicals (i.e., hydraulic fluid), or concrete/cement wash could have a significant adverse environmental impact if it entered the River Avon, the severity being contingent on the substance and quantity lost. The works could also pose a risk of pollution into the River Avon from works associated with any concrete repairs and resurfacing works. The hydro-demolition process also involves high-pressure delivery of clean potable water to remove areas of concrete and requires 18,000 litres of water per day for a duration of 3 to 4 days in each phase of the works. Resulting waste-water will contain a high volume of suspended solids and have an elevated pH which, if released into the River Avon, would have a significant detrimental impact.

With this in mind, a three-stage hydro-demolition Waste Water Management Plan has been developed e.g. (1) management of the hydro-demolition process and the

collection of waste-water, (2) treatment of hydro-demolition waste-water using a two stage silt-buster process (for pH and suspended solids), and (3) disposal of the treated water (treated waste-water will be discharged to roadside grass verges through a geotextile silt sock filter providing further filtration (to less than 100 microns), or fed into an Intermediate Bulk Container (IBC) and disposed offsite).

Hydro-demolition will involve the following: (i) scaffolding will be installed on the underside of the structure, and the scaffolding will be tanked using visqueen sheeting to create a watertight bund, (ii) pumps will be placed into the bund and will feed back to the bridge deck, where a Siltbuster HD unit will be positioned, (iii) USL Ekspan (sub-contractor) will saw cut and break out the existing joint to expose the concrete deck where hydro-demolition is required, (iv) the area for concrete (for removal) will be marked out and expansion joint 'air gap plugs' will be inserted into the air gap to prevent any debris from migrating down the air gap. The plugs will also reduce the volume of water that will pass through the air gap into the bund, (v) Sabre (sub-contractor) will set up protective tenting to enclose the expansion joint locations, (vi) pumps will be installed in the trench to feed any wastewater into the Siltbuster HD unit, (vii) hydro-demolition will begin to remove the concrete, (viii) all wastewaters will be collected by the bund or by the 'air gap plugs' and pumped into the Siltbuster HD unit to remove any suspended solids and neutralise the high pH by using a fully automated CO₂ dosing process to counterbalance the alkalinity. Safe estimate target values are: suspended solids – 50 mg/l, and pH level to be neutral (7 to 9) at discharge, (ix) once the required quantity of concrete has been removed, a road sweeper/gully cleaner will be brought in to clear up spoil created during the hydro-demolition process, and (x) treated wastewater will be disposed of in an appropriate manner e.g., discharging the processed water to roadside grass verges through as geotextile silt sock or fed into an IBC and disposed offsite.

Ancillary plant, vehicles and NRMM will also be stored in the compound and the accidental release of pollutants is also extremely unlikely. Pollution prevention measures, for example, will be enforced onsite and Pollution Prevention Guidance (PPGs) and Guidance for Pollution Prevention (GPP) will be strictly adhered to, reducing the likelihood of a loss of containment occurring.

Considering the nature, short-term duration, size and scale of the scheme, and with implementation of the mitigation detailed below, the proposed works impacts on the road drainage and water environment are assessed as temporary minor adverse in magnitude.

Upon completion of the works, no residual impacts are anticipated in relation to the road drainage and water environment.

Proposed road drainage and water environment mitigation measures:

- No work will take place within the River Avon.
- An edge protection system (EPS) will be utilised to prevent material, ancillary plant, debris, sediment, etc., escaping over the A95 130 Bridge of Avon deck during works. Sandbags will be located at the bottom of the containment systems and debris netting will cover the EPS.

- The abstraction or transfers of water, or the washing of tools in the River Avon is not permitted.
- No discharges into the River Avon, or drainage systems, will be permitted. To this end, roadside gullies will be covered to ensure no connectivity between the bridge deck and the River Avon.
- Appropriate containment measures will be in place to prevent any loss of construction materials into the River Avon.
- The Contractor will submit a RAMS (for approval) prior to works commencing which details how pollution control measures will be managed (including how the control measures will be installed, inspected and maintained to prevent failure during the work). The Contractor will also inspect the control measures daily for movement, leakage and general deterioration and will take immediate remedial action to rectify any defects.
- All water used onsite will be delivered by bulk tanker and be of potable quality.
- Hydro-demolition works will avoid heavy rainfall periods which could affect the performance of the Siltbuster HD Unit.
- The Contractor will develop an Incident (Emergency) Response Plan (IRP) which describes the procedures, lines of authority and processes that will be followed to ensure that incident response efforts are prompt, efficient, and suitable for particular circumstances. The IRP will detail the procedures to be undertaken in the event of the release of any sediment into the River Avon, serious spillage of chemical, fuel or other hazardous wastes (e.g., concrete), non-compliance incident with any permit or license, or other such risks that could lead to a pollution incident, including flood risks.
- An edge protection system will be utilised to prevent material, ancillary plant, debris, sediment, etc., escaping over the A95 130 Bridge of Avon bridge deck during works. Sandbags will be located at the bottom of the containment systems and debris netting will cover the EPS.
- Concrete batching (if required) will be undertaken on an impermeable surface, and a minimum of 10 m from the River Avon and drainage systems.
- All site personnel will be made aware of site spillage response procedures and in the event of a spill, all works associated with the spill will stop, and the incident reported to the Site Supervisor. Small spills that did not leave the site boundary and are cleaned up without material environmental harm or residual environmental impact would most likely not be required to be notified to SEPA or other authorities. However, all such incidents must to be recorded and reported to BEAR Scotland's Environmental Team. In the event of a 'serious incident', SEPA will be notified without delay. Such notification will include: (i) the time and duration of the incident, (ii) a description of the cause of the incident, (iii) any effect on the environment as a result of the incident, and (iv) any measures taken to minimise or mitigate the effect and prevent a recurrence.
- All waste, vehicles, ancillary plant, NRMM and fuels will be stored in the compound(s) or laydown area and will be secured and located, if space is available, at least 10 m from drainage entry points and the River Avon, in order to

comply with GPP 5 'works and maintenance in or near water'. Refuelling will only be undertaken at designated refuelling areas (e.g., on hardstanding, with spill kits available, and >10 m from drainage entry points and the River Avon, where practicable). Spill kits will also be available within all site vehicles and spill kits will be replenished onsite when required. Only designated trained and competent operatives will be authorised to refuel plant. Generators, and other ancillary plant and NRMM, where there is a risk of leakage of oil or fuel, will have internal bunding OR must have a secondary containment system (e.g., drip trays, plant nappies, etc.) placed beneath them that meets 110% capacity requirements. Containment systems will also be emptied regularly. All waste, vehicles, ancillary plant, NRMM and fuels will also be stored in a manner that ensures they are protected from damage by collision or extremes of weather. Any vehicles, ancillary plant, and NRMM not in operation will (where possible) be sited in the laydown area.

- Regular visual pollution inspections of the designated laydown area and work site will be conducted (e.g., site walkover by engineer or Site Supervisor), especially during periods of heavy rain.
- All vehicles and NRMM onsite will have been regularly maintained, paying attention to the integrity of oil tanks, coolant systems, gaskets etc. A checklist will be present to make sure that the checks have been carried out.
- When the works are complete, but before pollution control measures are removed, the Contractor will ensure that all materials, debris, tools, plant and equipment are removed from the work area. The Contractor will also check the area thoroughly for spillages or potential pollution sources and remove or clean-up anything found.

Climate

BEAR Scotland, working on behalf of Transport Scotland, undertake carbon monitoring of our major projects and operational activities. Emissions from our activities are recorded using Transport Scotland's Carbon Management System. BEAR Scotland also undertakes resource efficiency activities to manage and reduce emissions contributing to climate change. Works to refurbish the A95 130 Bridge of Avon bridge deck will also extend the maintenance intervals required for future works. In doing so, the service life of the structure is also extended.

During works there is potential for impacts as a result of the emission of greenhouse gases through the use of equipment, vehicles, and NRMM, material use and production, and transportation of material/waste. However, considering the nature, short-term duration, size and scale of the scheme, and the mitigation detailed below, the risk of significant impacts to climate are considered to be negligible adverse in magnitude.

Upon completion of the proposed scheme no residual impacts are anticipated on the climate.

Proposed climate mitigation measures:

- All mitigation measures detailed within 'Air Quality' and 'Material Assets and Waste' will be adhered to.
- The works will be undertaken utilising a day-time work pattern (07:30 – 17:30) and there is no requirement for additional lighting. In addition, local contractors and suppliers will be used as far as practicable to reduce fuel use and greenhouse gas emitted as part of the works.
- BEAR Scotland will adhere to its Carbon Management Policy.
- Where possible, materials will be sourced locally to reduce greenhouse gas emissions associated with materials movement, and waste will be disposed at local landfill.

Vulnerability of the project to risks

The A95 130 Bridge of Avon is not at risk of surface water flooding, and due to the height of the bridge above the River Avon, the bridge is not at risk of fluvial flooding.

Works are restricted to areas of made-ground on the A95 130 Bridge of Avon, with access to the site gained via the A95. TM will also employ lane closure with temporary traffic lights. As such, the proposed works impacts on road traffic accidents is assessed to be of negligible magnitude.

A SEMP will be produced by BEAR Scotland which sets out a framework to reduce the risk of adverse impacts from construction activities on sensitive environmental receptors. The Contractor will comply with all conditions of the SEMP during works and may be subject to audit throughout the contract. A Designer's Risk Register will also be prepared by BEAR Scotland, which addresses potential environmental risks. A Method Statement will also be produced by the Contractor and will recognise and highlight the environmental risks and detail how these will be addressed, as well as contingency plans to deal with environmental incidents. The Contractor will submit the RAMS (for approval) prior to works commencing. As such, the proposed works impacts on the vulnerability of the project to environmental risk is considered to temporary minor adverse in magnitude.

Considering the above, it is judged that the residual effects of the scheme to risks from major accidents or disasters is of negligible magnitude.

Assessment cumulative effects

There are no anticipated 'in-combination' effects based on the information currently available. Discussion with BEAR Design Teams, for example, established that there are no projects confirmed that may result in an 'in-combination' effect.

A search using [Moray Council 'Simple Search'](#) identified that there are no planning applications within 300 m of the scheme.

Assessments of the environmental effects

This assessment has identified potential effects on two environmental receptors, namely; biodiversity and road drainage and the water environment.

An HRA screening and consultation with NatureScot were undertaken to determine if the bridge refurbishment works could have connectivity with the River Spey SAC. NatureScot concluded that LSE existed therefore an AA was completed as part of the HRA process to assess potential risks to the qualifying features as a result of the works. The AA concluded that there is sufficient information and assessment evidence to conclude that with mitigation in place, the works will not result in any AESI (based on the objective evidence detailed in the 'Description of Main Environmental Impacts and Proposed Mitigation' section).

The NatureScot Area Officer for Tayside and Grampian was consulted regarding the AA in April 2022. The Area Officer has stated that they agree with the conclusions of the HRA.

Works will also not require any species licensing prior to works proceeding.

No further assessment of environmental effects or consultation with statutory bodies is required.

Statement of case in support of a Determination that a statutory EIA is not required

This is a relevant project in terms of section 55A(16) of the Roads (Scotland) Act 1984 as it is a project for the improvement of a road and the completed works (together with any area occupied by apparatus, equipment, machinery, materials, plant, spoil heaps, or other such facilities or stores required during the period of construction) are situated in part in the River Spey SAC within the meaning of regulation 2(1) of the Environmental Impact Assessment (Scotland) Regulations 1999.

The project has been subject to screening using the Annex III criteria to determine whether a formal Environmental Impact Assessment is required under the Roads (Scotland) act 1984 (as amended by The Roads (Scotland) Act 1984 (Environmental Impact Assessment) Regulations 2017). Screening using Annex III criteria, reference to consultations undertaken and review of available information has not identified the need for a statutory EIA.

The project will not have significant effects on the environment by virtue of factors such as:

Characteristics of the scheme:

- The total working area is less than 1 ha.

- The works are limited to like-for-like replacement of existing A95 130 Bridge of Avon components. The works footprint is restricted to made-ground on the bridge, and no works are required within the River Avon.
- Works are anticipated to only take 68-days to complete, with works programmed to take place between 07:30 and 17:30. During the 68-day construction period, the A95 130 Bridge of Avon will remain open, with temporary traffic lights in operation.
- There will be limited consumption of materials and natural resources or generation of waste associated with the works e.g., the Design Engineer has estimated that road planings, concrete and metal from the elastomeric joints will be removed from site and fully recycled. Where possible, materials will also be derived from recycled, secondary or re-used origin within design specifications.
- Bridge deck refurbishment works will protect against future deterioration of the structure, thus minimising the extent of future works required on the A95 130 Bridge of Avon.

Location of the scheme:

- The scheme does not lie within any sites of historical, cultural or archaeological significance.
- The works are purely maintenance and are restricted to upgrading and strengthening, on a like-for-like basis, essential bridge components. As such, no significant adverse impacts on the cultural heritage or material assets of the A95 130 Bridge of Avon, which is recorded as an undesignated cultural heritage asset.
- The scheme is not located within any areas designated for landscape interests.
- Land use will not change as a result of the works.
- The works do not require any private land acquisition.
- Although the bridge spans the River Spey SAC, all works are contained to the A95 130 Bridge of Avon therefore no direct land take, land use or site clearance is required, and the works will therefore not result in habitat loss or species fragmentation from within the SAC.
- The scheme does not lie within any sites designated for their geology or soils.
- The scheme is not located within a densely populated area.

Characteristics of potential impacts of the scheme:

- An HRA/AA concluded that there is sufficient information and assessment evidence to conclude that with mitigation in place, the works will not result in any AESI (based on the objective evidence detailed in the 'Description of Main Environmental Impacts and Proposed Mitigation' section).
- With good practice pollution prevention measures implemented onsite, there is a negligible risk of a pollution event e.g., the SEMP, Designer's Risk Register, and activity-specific method statements include plans to address environmental incidents.

- Any potential NMU impacts will be temporary, short-term, and limited to the construction phase.
- As the works are restricted to upgrading and strengthening, on a like-for-like basis, essential bridge components, no change is predicted in respect to the vulnerability of the A95 130 Bridge of Avon to the risk (or severity) of major accidents or disasters.
- No impacts on the environment are expected during the operational phase as a result of the works.

Annex A

“sensitive area” means any of the following:

- land notified under sections 3(1) or 5(1) (sites of special scientific interest) of the Nature Conservation (Scotland) Act 2004
- land in respect of which an order has been made under section 23 (nature conservation orders) of the Nature Conservation (Scotland) Act 2004
- a European site within the meaning of regulation 10 of the Conservation (Natural Habitats, &c.) Regulations 1994
- a property appearing in the World Heritage List kept under article 11(2) of the 1972 UNESCO Convention for the Protection of the World Cultural and Natural Heritage
- a scheduled monument within the meaning of the Ancient Monuments and Archaeological Areas Act 1979
- a National Scenic Area as designated by a direction made by the Scottish Ministers under section 263A of the Town and Country Planning (Scotland) Act 1997
- an area designated as a National Park by a designation order made by the Scottish Ministers under section 6(1) of the National Parks (Scotland) Act 2000.



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